NOTES AND BRIEF ARTICLES

[Unsigned notes are by the editor]

Professor F. S. Earle spent the summer months at his home in western Cuba, but expects to return to Porto Rico in September.

Dr. H. E. Thomas has resigned his position at Cornell University to accept one with Professor Kern at Pennsylvania State College.

Dr. F. J. Seaver accompanied Dr. Britton to Trinidad last February and returned with a splendid collection of fungi, in which the parasitic forms especially are well represented.

Mr. Rush P. Marshall, formerly Pathological Inspector, Office of Investigations in Forest Pathology, has been engaged to work on the potato wart disease for the Federal Horticultural Board.

Dr. Alfred H. W. Povah has resigned as assistant professor of Forest Botany and Pathology in the New York State College of Forestry to accept the position of associate professor of Plant Pathology and associate pathologist at the Alabama Polytechnic Institute, Auburn, Alabama.

Mr. Paul V. Siggers has accepted the position of Pathologist for the United Fruit Company and will be stationed at Changuinola, Panama, investigating diseases of the cocoanut palm and cacao. He was formerly Scientific Assistant for the Office of Investigations in Forest Pathology.

Mr. E. J. Wortley has resigned his position as Director of Agriculture in Bermuda to accept a similar one in Nyasaland. Mr. E. A. McCallan, a native Bermudian and a graduate of the Ontario Agricultural College, succeeds him as Director at the Agricultural Station in Bermuda.

Professor A. de Jaczewski, of the Institut de Mycologie at Petrograd, is on a visit to the United States after being cut off from the outside world about six years. He called at the Garden August 11, shortly after his arrival, and expects to spend two months in various parts of the country.

JOHN MACOUN

Professor John Macoun, the distinguished Canadian naturalist, died July 18, 1920, at Sidney, British Columbia, at the advanced age of 89. He was born near Belfast, Ireland, and came to Canada in 1850 with his mother and two brothers. After preliminary scientific training in teaching, he was engaged for many years in botanical and zoological explorations in western Canada for the Canadian Government and at length became attached to the Geological and Natural History Survey. His scientific work covered a wide range, both in botany and zoology, and he was ably assisted by his son, the late James M. Macoun. Many of the plants collected by them are in the herbarium of the New York Botanical Garden.

W. A. MURRILL

At the request of naturalists generally throughout Canada, the Ottawa Field-Naturalists' Club has decided to receive subscriptions for a permanent memorial in honor of the late Professor John Macoun, who died on July 18, 1920. Many of his friends have thought that the memorial should take the form of a painted portrait to be hung in the Victoria Memorial Museum. Such a memorial has now been decided upon and the painting will be made by Mr. Franklin Brownell, of Ottawa, the well-known portrait painter. The expenses in connection therewith will be about $700. Subscriptions to this fund should be forwarded to Mr. Arthur Gibson, Dominion Entomologist, Ottawa, Canada.

EDWARD T. HARPER

Dr. Edward T. Harper died at his home in Geneseo, Illinois, January 14, 1921. He was born at Sabula, Iowa, September 28,

1857; graduated from Oberlin College in 1881 and from the Chicago Theological Seminary in 1887; took a Ph.D. degree in Semitics at Leipzig in 1891; received the honorary degree of D.D. at Iowa College in 1902 and Oberlin in 1908; and for nineteen years, from 1892 to 1911, held the chair of Semitics and Comparative Religion at the Chicago Theological Seminary. From the time he retired because of ill health until shortly before his death, he was actively engaged in botanical studies, and had always been an ardent lover of plants. His botanical collections, which have been deposited in the Field Museum at Chicago, include a very full series of superb photographs and stereoscopic views of the fleshy fungi. Readers of MYCOLOGIA will remember an article on *Hypholoma* contributed by him in 1918; while his handsomely illustrated papers on *Pholiota, Stropharia,* and *Hypholoma,* published in the *Transactions of the Wisconsin Academy of Sciences,* 1912–1914, are well known to all students of the gill-fungi. Dr. Harper's sustained activity in mycology and his success in this field were due in part to the sympathetic interest and help of his brother, Robert A. Harper, Professor of Botany in Columbia University.

W. A. MURRILL

A long list of Long Island fungi, prepared by Burnham and Latham, appeared as a "second supplementary list" in *Torreya* for January–February, 1921. Most of the species included belong to inconspicuous groups.

"The Fungal Diseases of the Common Larch," by W. E. Hiley, contains over 200 pages, 23 plates, and 28 figures. The work includes a discussion of the various larch diseases, a summary of the relations of the larch to its diseases, and an extensive bibliography.

Bacterial wilt of the castor bean forms the subject of a well-illustrated paper by E. F. Smith and G. H. Godfrey published in the *Journal of Agricultural Research* for May 16, 1921. Diseased plants were first received from Townsend, Georgia, where

the loss was sometimes as high as 30 per cent. The disease was later found at many points in Florida and elsewhere. The causal organism appeared to be *Bacterium solanacearum,* which attacks a number of different plants.

"A Handbook of British Lichens," by Annie Lorrain Smith, containing 158 pages of text and 90 text figures, has just been published by the British Museum. The object of the book is to supply a portable guide to the determination of lichens in the field. The 128 genera included are briefly described, while the species are distinguished by keys only. There is an introduction in which the morphology, ecology, etc., of lichens are discussed, and a glossary of the chief terms employed.

"Insects Injurious to Deciduous Shade Trees and Their Control," by Jacob Kotinsky, published as Farmers' Bulletin 1169 of the U. S. Department of Agriculture, is of interest to mycologists because of the close connection found to exist between insects and fungi when it comes to the treatment of diseases. In the gall-insects, which rarely affect the vitality of a tree, the connection between insect and host is exceedingly close. In one group the mother inserts an acid with the egg, but in all other groups it is the growth of the larva that provides the stimulus, the contact between the insect and the surrounding plant tissue being very intimate.

Last January I secured, near Greenville, South Carolina, several specimens which Dr. Burt, of the Missouri Botanical Garden, identified as *Tricholoma terreum.* One of the specimens which I kept in Greenville had been pierced by a pine needle. The other specimens kept well for a week or more, seeming to have the consistency of a *Russula,* but this pierced specimen rotted where the needle pierced it. Instead of the smell being objectionable it was sweet and would have made a good cologne odor. I do not know whether the fungus produced this odor from the pine needle or whether the needle caused the mushroom to give the odor. The needle was of the long variety peculiar, I believe, to the Piedmont section.—*E. D. Hallock*

On July 11 Mrs. John R. Delafield sent to the Garden, from her lawn in Riverdale, an unusually large specimen of *Grifola gigantea,* a polypore that grows in tufted form from buried roots, stumps, and about the base of trees, the mycelium being parasitic on the roots of oak and other deciduous trees in this region. This particular specimen measured two feet across and one foot in height and developed from a stump which had been cut off close to the ground. It was nearly white when young and fresh, becoming grayish on developing and smoky-blackish on drying. Another large fungus, *Grifola Berkeleyi,* similar in shape to *G. gigantea,* occurs about oak trees in the eastern United States, but may readily be distinguished by its creamy color and the lack of blackish tints on drying.

Spike disease of sandalwood in India has been discussed by several investigators in recent years. Some believe that it is caused by ultra-microscopic organisms, and perhaps disseminated by insects, while its spread from centers favors the infection theory. Experiments at Komattiyur and Andiappanur gave results entirely opposed to the theory that spike is caused by an unbalanced circulation of sap. Transmission of infection over the long distances observed has not been explained, however. Birds, insects, or flying foxes may act as carriers, but carriage through other plants is considered more probable. Spike develops more rapidly in some areas than in others, and is more rapid in seedlings and saplings than in older trees. May to July is the most favorable portion of the year for its extension. Spike does not progress regularly from branch to branch. The preventive measures proposed include mainly isolation and destruction of the trees infected.

The North American species of *Stereum* were discussed by E. A. Burt in the *Annals of the Missouri Botanical Garden* issued in December, 1920. Seventy-seven species are recognized in this difficult genus, while several are imperfectly known and many now belong in *Aleurodiscus, Thelephora,* etc. The main divisions of the genus are based on the presence or absence, or

attachment of the stipe, but these differences are not considered sufficient to divide the genus. Five thickly crowded half-tone plates add greatly to the value of this excellent paper of 160 pages of text and 48 text figures.

Species described as new in this paper are as follows: *Stereum caespitosum,* Jamaica, *Murrill; S. saxitas,* Mexico, *Murrill*—also Jamaica, *Johnson; S. pubescens,* Montana, *Mrs. Fitch; S. conicum,* Cuba, *Wright; S. patelliforme,* Washington, *Suksdorf*—also California and New Mexico; *S. Earlei,* Jamaica, *Earle; S. magnisporum,* Jamaica, *Murrill; S. spumeum,* New York, *Burnham*—also Pennsylvania, South Carolina, Louisiana, and Mexico; *S. erumpens,* District of Columbia, *Shear*—and known to occur from Rhode Island to Alabama and west to Washington and Oregon; *S. sepium,* Georgia, *Humphrey*—and known to occur from Pennsylvania to Mexico and Colombia; *S. heterosporum,* Mexico, *Matthews*—and known on the Pacific coast as far northward as Oregon; and *S. durum,* Mexico, *C. L. Smith.*

In Bulletin 933 of the U. S. Department of Agriculture, on Black Walnut, by F. S. Baker, the following statement is made regarding the diseases caused by fungi:

Black walnut is moderately free from tree diseases and is as resistant to injury as any of its associates. Red butt rot is found in a small percentage of trees, mostly old trees of northern growth, although it is very bad in parts of central Kentucky. As a rule the rot extends only a short distance up the tree, and "butting off" the lower 3 or 4 feet of a hollow tree will usually remove most of this defect. The "doty" zone that surrounds the advanced decomposition at the center is generally narrow; it is frequently possible, in fact, to saw boards within an inch of an open hollow before any discoloration appears.

A white top rot is found, limited almost entirely to southern logs, particularly from Oklahoma and Texas. Its presence is indicated by punky knots and occasionally by conks on the upper trunk. This rot extends a greater distance up and down the trunk than the red butt rot and is a much greater detriment to

the logs, especially if they are to be used for sawing into lumber. A large log with a defective center might be made to furnish a large amount of first-class veneer, but could not to advantage be sawed into lumber.

The relation of the health of the host and other factors to infection of *Apium graveolens* by *Septoria Apii* is discussed at length by H. E. Thomas in the *Torrey Bulletin* for January, 1921. According to the author, "students of immunity and susceptibility have been slow to recognize any fundamental distinctions in the relations of host and parasite in the great group of organisms which cause disease in plants and animals, and yet the concepts of saprophyte, semi-saprophyte, and obligate parasite have been current at least since the time of DeBary. Under the influence perhaps chiefly of Ehrlich's side chain theory of immunity, degrees of resistance have been regarded on the one hand as inversely parallel to the virulence of the attacking organism, and on the other hand as directly parallel to the vigor of the host. In plant pathology this view has been particularly prominent in the literature of the facultative parasites. With the development of the science of immunity, the animal pathologist has gone so far as to regard the interactions of host and parasite as specific in each case. It is becoming increasingly apparent that the specificity in the relation of plant pathogens with their hosts must be reckoned with. The saprophytic fungus may be able to live on dead tissue from a wide range of plants, sometimes showing little preference for any one of them. The semi-saprophyte may or may not be more limited in its food range on dead material and attacks from one to a considerable number of living plants with varying degrees of virulence and with variable results to the hosts. The obligate parasite is usually still more restricted in its host range and is much more closely adapted to the living host, having completely lost the ability to grow on dead tissue, even that of its most common host. In the more highly specialized forms the relation may become specific to such a degree that a comparatively slight change in either host or fungus will completely change the virulence of the parasite or the effect on the

host. It is to be expected, after the long period of association necessary for the close adaptation of fungus to host, that both would be more or less similarly influenced by their environmental conditions. I shall present data to show that the infection of *Apium graveolens* by *Septoria Apii* is favored by conditions which accelerate the growth of the host. The comparatively narrow specialization of the *Septoria* on celery suggests a promising outlook for experiments in breeding for resistance. More intensive work in this direction is needed."

IS AMANITA PANTHERINA EDIBLE OR POISONOUS?

It will interest mycologists to note that Dr. Raebiger[1] has experimented toxicologically with *Amanita pantherina,* a species usually regarded with fear. Raebiger fed the plant raw to guinea pigs, while rabbits were given material, in part raw, in part cooked. Two goats and two pigs were supplied with daily rations of ten German pounds of parboiled material for a period of six weeks. In the case of the pigs, other poisonous and suspicious species were included in the rations. In none of these animals was it possible to observe any impairment of their health.

The author states further that he has for years gathered this species for his own consumption without experiencing the slightest poisonous effects. He admitted no other species into his messes of *A. pantherina,* and, before cooking, would remove the cuticle of the pileus, the "cortex" of the stem, and then parboil, throwing away the water.

We know that edibility for this species, after preliminary precautions such as Dr. Raebiger took, has been claimed by Michael,[2] who says that it is excellent, cooked, or as a pickle. Ford[3] regards it as mildly poisonous. Inoko[4] and Boehm[5] have made

[1] Raebiger, Dr., Zur Kenntnis der Gift und Nutzpllze. Berliner klin. Wochenschrift, No. 38. 1919.

[2] Michael, E., Fuehrer fuer Pilzfreunde. Ausgabe 'B,' Gruppe 76. 1918.

[3] Ford, W. W., The Distribution of Poisons in the Amanitas. Jour. of Pharm. and Exper. Therap., Vol. I, No. 2, p. 277. Aug. 1909; and, A Clinical Study of Mushroom Intoxication. The Johns Hopkins Bull., XVIII, No. 193, pp. 124 (14) and 129 (20). April, 1907.

[4] Inoko, Y., Ueber die giftigen Bestandtheile und Wirkungen des Japan-

rather exhaustive chemico-toxicological examinations. *Amanita pantherinoides* Murrill, a related species, "was eaten by two persons with almost fatal results."[6]

With several European forms, a Japanese form, with our own more or less closely allied species (*A. cothurnata* Atk., *A. velatipes* Atk., and *A. pantherinoides* Murrill), and with the umbrinous form of *A. muscaria* entering into the complex all too frequently called "A. pantherina," it would appear that results, in a toxicological examination of this "species," are likely to prove inconclusive unless considerable systematic acumen is permitted to supervene.

L. C. C. KRIEGER

ischen Pantherschwammes. Mittheil. aus der Medic. Fac. der Kaiserl. Jap. Univ., Tokio, Bd. I, No. 3, pp. 277–306. 1889; and No. 4, pp. 313–331. 1890.

[5] Boehm, R., Beitraege zur Kenntnis der Hutpilze in Chemischer und toxicologischer Beziehung . . . . II. *Amanita pantherina.* Archiv fuer exper. Pathol. u. Pharmac. v. Naunyn u. Schmeideberg, XIX. 1885, p. 60; see also Berichte d. Deutsch. Chem. Gesell., XIX. 1886. Refer. p. 34.

[6] Murri", W. A., in Mycologia 10: 289. Nov., 1918.